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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/037,546	10/22/2001	Robert D. Pritchard	33729	7763

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EXAMINER
NGUYEN, TRAN N

ART UNIT	PAPER NUMBER
2834	

DATE MAILED: 07/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/037,546	PRITCHARD ET AL.	
	Examiner	Art Unit	
	Tran N. Nguyen	2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on *09 May 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☐ Claim(s) *1-19 and 27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) *1-19 and 27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Election/Restriction

1. Applicant's election of claims 1-19 and 27 is acknowledged. Since Applicant did not provide any traversal arguments to the restriction requirement, the response is considered as election without traverse; therefore, the election/restriction is made FINAL.

Claim Objection

2. Claims 1-19 and 27 are objected because of minor informality as following: The recitation "a disc having top and bottom external surfaces" should be changed to "a disc having top and bottom ~~*external*~~ surfaces" because a disc is understood as a plate with upper (top) and lower (bottom) surfaces. The term "external surfaces" implies that there are internal surfaces, wherein a subject matter that has both internal and external surfaces would be consider most likely as a hollow annular configuration such as a cylinder.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. **Claims 1-3, 5 and 12** are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art figs 1a-1c (hereafter AAPA fig 1) in view of Mesenich (US 4810985).

AAPA fig 1 discloses a one-piece field core shell comprising an outer annular ring, integral to and encircling a center axis of the disc and extending from the bottom external surface in a

direction that is perpendicular to the bottom surface of the disc and parallel to the center axis of the disc; an inner annular ring integral to and encircling a center axis of the disc, said inner annular axis spaced radially inward from said outer annular ring and extending from the bottom external surface in a direction that is perpendicular to the bottom surface of the disc and parallel to the center axis of the disc. AAPA substantially discloses the claimed invention except for the limitations of a mounting flange integral to the disc and having a bore extending from the mounting flange to the bottom external surface of the disc, wherein the mounting flange encircles a center axis of the disc and extends in a perpendicular direction to the top external surface of the disc and parallel to the center axis of the disc.

Mesenich, however, teaches a core structure (fig 3a) having a mounting flange (30) integral to the disc having top surface (242) and having a bore extending from the mounting flange to the bottom surface of the disc, wherein the mounting flange encircles a center axis of the disc and extends in a perpendicular direction to the top surface (242) of the disc and parallel to the center axis of the disc. Mesenich teaches that this structure of the magnetic core would provide the core structure with a high mechanical stability and eddy current depletion with low cost of manufacture.

Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the magnetic field core shell by embodying a mounting flange integral to the disc and having a bore extending from the mounting flange to the bottom external surface of the disc, wherein the mounting flange encircles a center axis of the disc and extends in a perpendicular direction to the top external surface of the disc and parallel to the center axis of the disc, as taught by Mesenich. Doing so would provide the core structure with a high mechanical stability and eddy current depletion with low cost of manufacture.

4. **Claim 4** is rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA fig 1 and Mesenich, as applied in the rejection against the base claim, and further in view of Lindgren (US 4829205).

The combination of **AAPA fig 1 and Mesenich** refs substantially discloses the claimed invention, except for the added limitations of the wire winding pod having hole through the top surface of the wire winding pod to feed wire leads.

Lindgren, however, teaches a core (8) and a core base (15) having hole through the top surface of the wire-winding pod to feed wire leads (19) therethrough. This would enable the connection of the winding to the external power supply source and also provide ventilation means thereof.

Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the magnetic field core shell by embodying the wire winding pod having hole through the top surface of the wire winding pod to feed wire leads, as taught by Lindgren. Doing so would enable the connection of the winding to the external power supply source and also provide ventilation means thereof.

5. **Claim 6** is rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA fig 1 and Mesenich, as applied in the rejection against the base claim, and further in view of level of ordinary skills of a worker in the art.

The combination of **AAPA fig 1 and Mesenich** refs substantially discloses the claimed invention, except for the added limitations of the inner annular ring and the outer annular ring extend in a direction that is perpendicular to the bottom surface of the disc and parallel to the center axis of the disc and are tapered at an angle alpha.

AAPA fig 1 discloses the inner annular ring (24a) and the outer annular ring (26a) extend in a direction that is perpendicular to the bottom surface of the disc and parallel to the center axis of the disc. Mesenich also discloses the inner annular ring (352a) and the outer annular ring (348a) extend in a direction that is perpendicular to the bottom surface of the disc and parallel to the center axis of the disc. Both AAPA fig 1's and Mesenich's structure configure to form a winding pod between the inner and outer rings. Thus, those skilled in the art would understand that the size of the winding pod can be modify by tapering the rings so that they would yield a suitable size to accommodate the winding therein.

Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the magnetic field core shell by tapering the rings to change the size of the winding pod for suitable accommodation for the winding therein. Doing so would ensure the winding pod being sized to correspond to the winding's size for proper fit and it has been held that a

change in size or shape is generally recognized as being within the level of ordinary skill in the art. ***In re Rose,* 105 USPQ 237 (CCPA 1955)** (emphasis added).

6. **Claims 7-8, and 10** are rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA fig 1 and Mesenich, as applied in the rejection against the base claim, and further in view of Aoki (US 4088914).

AAPA fig 1 and Mesenich discloses the claimed invention except for the limitations of the mounting flange extends parallel to a plane of the top surface of the disc.

Aoki, however, teaches, a mounting structure having a mounting flange extended portion (40C fig 4) and bore portion (40C2) for press-fitting the shaft inside the bore portion. Those skilled in the art would understand that Aoki's mounting structure is design with mounting flange-extending parallel to the plane of the top surface of the end plate in order to configure a bore at a central diameter that is smaller than the diameter of the inner surface of the core. This provide a core with simplified structure for mounting the shaft at a diameter smaller than the diameter of the inner ring without additional count parts resulting in facilitating assembly process thereof.

Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the magnetic field core shell by configuring the mounting flange extends parallel to a plane of the top surface of the disc, as taught by Aoki. Doing so would provide a core with simplified structure for mounting the shaft at a diameter smaller than the diameter of the inner ring without additional count parts resulting in facilitating assembly process thereof.

7. **Claim 9** is rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA fig 1, Mesenich, and Aoki, as applied in the rejection against the base claim, and further in view of Lindgren (US 4829205).

See preceding section for reasoning of this rejection based on Lindgren ref.

8. **Claim 11** is rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA fig 1, Mesenich, and Aoki, as applied in the rejection against the base claim, and further in view of level of ordinary skills of a worker in the art.

See preceding section for reasoning of this rejection based on ordinary skills of a worker in the art ref.

9. **Claims 13, 14, 16/14** (read as claim 16 as claimed in claim 14), **and 18/14** are rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA fig 1 and Mesenich, as applied in the rejection against the base and further in view of Hodjat et al (US 5947853).

The combination of **AAPA fig 1 and Mesenich** refs substantially discloses the claimed invention, except for the limitations of the mount flange is sprin-roll formed.

Hodjat, however, teaches a spun-roll formed hub with mounting flange (fig 2). Spin-roll formed mounting flange with bore are well known in the art (see cited refs for evidence support this statement).

Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the mounting flange as a spun-roll formed of a disc of sheet metal, as taught by Hodjat. Doing so would enable to configure the mounting flange with precise bore's dimension for proper fitting of the shaft.

Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the magnetic field core shell by forming the mounting flange as a spin-roll formed structure, as taught by Hodjat. Doing so would enable to configure the mounting flange with precise bore dimension in order to fit the shaft therein.

10. **Claim 17/14** is rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA fig 1, Mesenich, and Hodjat, as applied in the rejection against the base claim, and further in view of Lindgren (US 4829205).

See preceding section for reasoning of this rejection based on Lindgren ref.

11. **Claim 19/14** is rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA fig 1, Hodjat and Mesenich, as applied in the rejection against the base claim, and further in view of level of ordinary skills of a worker in the art.

See preceding section for reasoning of this rejection based on ordinary skills of a worker in the art ref.

12. **Claim 15, 16/15** (read as claim 16 as claimed in claim 14), **and 18/14** are rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA fig 1, Mesenich, Hodjat, and Aoki (US 4088914).

See preceding rejection section related to ref Aoki for reasoning of the rejection.

13. **Claim 17/15** is rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA fig 1, Mesenich, Hodjat, Aoki, and further in view of Lindgren (US 4829205).

See preceding section for reasoning of this rejection based on Lindgren ref.

14. **Claim 19/15** is rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA fig 1, Hodjat, Mesenich, and Aoki, as applied in the rejection against the base claim, and further in view of level of ordinary skills of a worker in the art.

See preceding section for reasoning of this rejection based on ordinary skills of a worker in the art ref.

15. **Claim 27** is rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art figs 1a-1c (hereafter AAPA fig 1) in view of Mesenich (US 4810985) and Lindgren (US 4829205).

AAPA fig 1 discloses a one-piece field core shell comprising an outer annular ring, integral to and encircling a center axis of the disc and extending from the bottom external surface in a direction that is perpendicular to the bottom surface of the disc and parallel to the center axis of the disc; an inner annular ring integral to and encircling a center axis of the disc, said inner

annular axis spaced radially inward from said outer annular ring and extending from the bottom external surface in a direction that is perpendicular to the bottom surface of the disc and parallel to the center axis of the disc. AAPA substantially discloses the claimed invention except for the following limitations of a spin-roll formed core having

(a) a mounting flange integral to the disc and having a bore extending from the mounting flange to the bottom external surface of the disc, wherein the mounting flange encircles a center axis of the disc and extends in a perpendicular direction to the top external surface of the disc and parallel to the center axis of the disc;

(b) the wire-winding pod having hole through the top surface of the wire-winding pod to feed wire leads.

Regarding the limitations as in subsection (a), Mesenich, however, teaches a core structure (fig 3a) having a mounting flange (30) integral to the disc having top surface (242) and having a bore extending from the mounting flange to the bottom surface of the disc, wherein the mounting flange encircles a center axis of the disc and extends in a perpendicular direction to the top surface (242) of the disc and parallel to the center axis of the disc. Mesenich teaches that this structure of the magnetic core would provide the core structure with a high mechanical stability and eddy current depletion with low cost of manufacture.

Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the magnetic field core shell by embodying a mounting flange integral to the disc and having a bore extending from the mounting flange to the bottom external surface of the disc, wherein the mounting flange encircles a center axis of the disc and extends in a perpendicular direction to the top external surface of the disc and parallel to the center axis of the disc, as taught by Mesenich. Doing so would provide the core structure with a high mechanical stability and eddy current depletion with low cost of manufacture.

Regarding the limitations as in subsection (b), Lindgren, however, teaches a core (8) and a core base (15) having hole through the top surface of the wire-winding pod to feed wire leads (19) therethrough. This would enable the connection of the winding to the external power supply source and also provide ventilation means thereof.

Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the magnetic field core shell by embodying the wire winding pod having hole

through the top surface of the wire winding pod to feed wire leads, as taught by Lindgren. Doing so would enable the connection of the winding to the external power supply source and also provide ventilation means thereof.

Regarding the spin-roll formed of the core shell structure, Hodjat, however, teaches a spun-roll formed hub with mounting flange (fig 2). Spin-roll formed mounting flange with bore are well known in the art (see cited refs for evidence support this statement).

Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the mounting flange as a spun-roll formed of a disc of sheet metal, as taught by Hodjat. Doing so would enable to configure the mounting flange with precise bore's dimension for proper fitting of the shaft.

Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the magnetic field core shell by forming the mounting flange as a spin-roll formed structure, as taught by Hodjat. Doing so would enable to configure the mounting flange with precise bore dimension in order to fit the shaft therein.

Communication

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tran N Nguyen whose telephone number is (703) 308-1639. The examiner can normally be reached on M-F 6:00AM-2:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703)-308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703)305-3431 for regular communications and (703)-395-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)-308-1782.

TRAN NGUYEN
PRIMARY PATENT EXAMINER
TC-2800